IN THE CLAIMS

1. (Currently amended) A modem interface for transferring data between a high data rate interface and a wireless interface, the modem interface comprising:

a plurality of parallel data highways having frames with time slots for transferring data, the plurality of data highways outputting data to the high data rate interface and the wireless interface in selected time slots, each data highway being at least partially dedicated to a separate function;

at least one of the data highways ~~having an input configured to receive~~ receiving data from the high data rate interface ~~in selected time slots~~;

at least one of the data highways having an input configured to receive data from the wireless interface in selected time slots; and

a first processor for controlling data transfer between the plurality of data highways and sending data using a sub-plurality of the data highways; and

a second processor sending data using a single one of the data highways.

2. (Original) The modem interface of claim 1 wherein the high data rate interface is an IOM-2 highway.

3. (Original) The modem interface of claim 1 wherein the high data rate interface is a PCM highway.

4. (Previously amended) The modem interface of claim 1 wherein the plurality of parallel data highways includes three parallel data highways.

B1

5. (Previously amended) The modem interface of claim 4 wherein each of the three parallel data highways has a 2 Mb/s data rate.

6. (Previously amended) The modem interface of claim 1 further comprising a plurality of read and write devices, each write device fixedly writing to one of the plurality of data highways and each read device reading data from any of the plurality of data highways.

7. (Previously amended) The modem interface of claim 6 wherein the processor controls each read device so that each read device reads from a selected one of the data highways.

8. (Original) The modem interface of claim 1 wherein the frames have sixteen time slots.

9. (Currently amended) A method for transferring data between a high data rate interface and a wireless interface, the method comprising:

providing a plurality of parallel data highways having frames with time slots for transferring data, each data highway being at least partially dedicated to a separate function;

B1

inputting data to the data highways from the high data rate interface and the wireless interface in selected time slots;

controlling data transfer between the plurality of highways; and

outputting data to the high data rate interface and the wireless interface in selected time slots; and

wherein one of the plurality of data highways only receives data from the high data rate interface and a first processor for sending data using a sub-plurality of the data highways and a second processor sending data using a single one of the data highways.

10. (Original) The method of claim 9 wherein the high data rate interface is an IOM-2 highway.

11. (Original) The method of claim 9 wherein the high data rate interface is a PCM highway.

12. (Previously amended) The method of claim 9 wherein the plurality of parallel data highways includes three parallel data highways.

B1

13. (Previously amended) The method of claim 9 wherein each of the three parallel data highways has a 2 Mb/s data rate.

14. (Previously amended) The method of claim 9 wherein the controlling ~~step~~ includes using a plurality of read and write devices, each write device fixedly writing to one of the plurality of data highways and each read device reading data from any of the plurality of data highways.

15. (Currently amended) A radio network terminal (RNT) for transferring data between a high data rate interface and a wireless interface, the RNT comprising:

a receiver and a transmitter for transferring data over the wireless interface;

an input and an output for transferring data over the high data rate interface;

a plurality of parallel data highways having frames with time slots for transferring data, the plurality of data highways outputting data to the high data rate interface and the wireless interface in selected time slots, each data highway being at least partially dedicated to a separate function;

at least one of the data highways ~~having an input configured to~~ receive only receiving data from the high data rate interface ~~in selected time slots~~;

at least one of the data highways having an input configured to receive data from the wireless interface in selected time slots; and

a first processor for controlling data transfer between the plurality of highways and sending data using a sub-plurality of the data highways; and

a second processor sending data using a single one of the data highways.

16. (Previously amended) The RNT of claim 15 wherein the receiver and the transmitter transfer data using QPSK modulation in CDMA format.

17. (Previously amended) The RNT of claim 15 wherein the RNT is operatively coupled to an ISDN terminal via the high data rate interface.

18. (Original) The RNT of claim 15 wherein the frames have sixteen time slots.

19. (Previously amended) The RNT of claim 15 wherein the plurality of parallel data highways includes three parallel data highways.

20. (Original) The RNT of claim 15 wherein the high data rate highway is an IOM-2 highway.

21. (Currently amended) A method of communicating data over a wireless interface of a wireless communication network having a first ~~communication~~ station and a second ~~communication~~ station, the method comprising:

producing data having a first high-level data link controlling (HDLC) encoding at the first station for transfer over the wireless interface;

encoding the first HDLC encoded data into a second HDLC format at the first station such that the produced data is double HDLC encoded;

transmitting the double HDLC encoded data over the wireless interface;

receiving the double HDLC encoded data at the second station; and

removing the second HDLC encoding to recover the first HDLC encoded data at the second station.

22. (Previously amended) The method of claim 21 wherein the first station is a radio network terminal and the second station is a radio carrier station, the method further comprising:

prior to producing the first HDLC encoded data, receiving the first HDLC encoded data from an IOM-2 highway.

23. (Previously amended) The method of claim 21 wherein the first station is a radio carrier station and the second station is a radio network terminal, the method further comprising:

prior to producing the first HDLC encoded data, receiving the first HDLC encoded data from a PCM highway.